AMATEUR AUGUST 1948 RADIO

IOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA





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AMATEUR RADIO

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EDITORIAL

*

tion of information from one nerson to another has often been reviewed and the various stages from smoke signal to the radio flash have filled us with wonderment and admiration for the ingenuity of man. The smoke signal was purely an amateur affair and coded puffs made communication an easy accomplishment within visual range. This primitive system has long been abandoned progressively giving way to telegraphy, telephony, and finally radio communication. Yes., the countryman has long since abandoned the smoke puff in favour of the Type 3 Mark 2 now so capably handled by the licenced Amateur in the service of his fellow men in times of difficulty.

The history of the communica-

From our knowledge of this world there will never be a surfeit of reliable information, and at no time is this more necessary than when human lives are in danger. Elsewhere in this issue is the record of a splendid Amateur achievement concerned with the speedy location of a child lost in the bush, and the enterprise of the Amateur in times of emergency as evidenced in the recent disastrous floods on the North Coast of New South Wales

These contingencies will occur countless times in the future involving young and old, and there will be many opportunities awaiting the Amateur for fine service. It is our sincere hope that our allocation of emergency network frequencies will long remain as our avenue for the humane assistance we so gladly offler. This is a controlled and skilled assistance that never sleeps, and merits the warm appreciation it is now receiving in official quarters.

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10 11

Page 2

100 WATTS FROM CLASS B 807s

It is one of the duties of the Technical Editor to scan all overseas publications coming to the W.I.A., with the object of reproducing any technical matter which would be of interest to readers of "Amateur Radio."

With this view in mind a new circuit for using our popular 80% in Class B is presented. The theoretical details of the circuit are reprinted from R.C.A. "Ham Tips," and a practical Speech Amplifier and Modulator, using the new circuit, from the English "Short Wave" magazine, February, 1986.

During the intervening years since its development by R.C.A. back in 1936, the 807 has become the Amateurs' number one favourite r.f. transmitting tube.



Fig. 1.—Effect of the resistor in the No.

1 grid circuit upon E₀ versus I₀

characteristics

However, comparatively little use has been made of its excellent class AB, characteristics in a.f. modulator service, perhaps because of the difficulties encountered in providing the required regulation of control-grid and screengrid voltages.

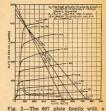
In order to avoid these difficulties, the possibility of using this tube as a zero-bias triode in Class B audio service was intriguing. Its low price, its small size, and its ability to deliver a great deal of power at low plate voltage provided the impetus for a series of experiments.

The first idea was to tie the control grid and the screen grid together in a manner similar to the way the old type 46 was operated in zero-hias Class B service. This produced a low-pervennce looked like the receding hair line of the Java Ape Man. It would be no brain wave to operate on such a plate family either, for distortion is high and the efficiency low.

Another idea was to ground the control grids and put the driving signal on the screen grids at zero bins. The arrangement produced a good plate family, but required excessive driving voltage for satisfactory power output. Several other schemes were tested with varying results—and then it happened!

One hundred and twenty waits of audio—with less than 6 waits of driving power—at only 750 plate volts. What's more, it's very simple. Just connect the cathodes to ground, put the driver transformer between the screen grids, and ground the centre tap. Then, connect the control grid of each tube to its acreen grid through a 20,000 ohm resistor. That's all there is to it.

During the development of this circuit, plate, families were taken with various values of resistance between the No. 2 grid and the No. 1 grid. The grid and the No. 1 grid. The trate the effect of the resistance of the No. 1 grid circuit upon the shape of the diode line. The driving voltage designnated Ec is that which is applied direcnated Sec. 1 shat which is applied direc-



20,000 ohm resistor in the No. 1 grid

ly to the No. 2 grid. Low values of resistance give poor knees, but as the resistance is increased, the knees improve, until the optimum condition is reached at about 20,000 ohms.

With this value, it can be seen from Fig. 2 that a suitafectory piate family is Fig. 2 that a suitafectory piate family is new zero bias connection are shown as dotted lines, and plate load lines are dotted lines, and plate load lines are suitaged from the suitage for the suitage from the suita

The only important technical difference between zero bias 807s and regular zero bias Class B triodes is in the values of positive grid impedance. Whereas

OPERATING DATA FOR 807s IN CLASS B Plate Supply Voltage 750 600 500 volts Peak A.F. Grid-to-Grid Voltage 555 555 volts

240 240

120

Peak A.F. Grid-to-Grid Voltage 555 555 555 volts Grid Driving Power 5.3 watts Grid Imped. per Valve 7100 7100 7100 ohms Grid Bias NH Nil Nil Plate-to-Plate Load 6650 5050 4000 ohms

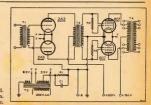
Anode Current (2 valves)
No Signal
Max, Signal
Audio Output (approx.)

Fig. 3 (at the right)
T1—Input audio transformer.
T2—Filament transformer.
T3—Driver transformer.

T4—Modulation transformer. R1—780 ohms, 10 watts, wire wound. R2, R4—20,000 ohms, 1 watt, carbon. C1—16 or 20 uF. 100 volt, electrolytic.

72 watts

10 8 Ma 240 240 Ma



Amateur Radio; August, 1948

most of the high-mu zero bias triodes require low-voltage high-current driving signals, the 807s take excitation at high voltage but low current.

Computations for driver tubes and transformer ratios for the new method of operations are not difficult to make. The 807s present to the driver a fairly constant load applied continuously, so the computations are just a matter of matching impedances. First, it is nec-essary to select the driver tubes and establish a set of conditions for them that will provide at least 20 per cent. more output than that required to drive the modulator tubes. For example, use a pair of 2A3s, which will give 10 watts with a plate-to-plate load of 5,000 ohms. The equivalent grid resistance of an 807 operated Class B is 7,100 ohms, so the driver transformer impedance ratio will be about a 1 to 1.4 step-up between total primary and one-half secondary (Impedance ratio = 7,100 divided by 5,000). This is equivalent to a turns ratio of 1 to approximately 1.2, because the turns ratio is equal to the square root of the impedance ratio (1.18 = the square root 1.4).

If your driver transformer doesn't have the required turns ratio in the forward direction, it may be correct when reversed, i.e., with the primary used as the secondary. If this expedient does not work, it will be necessary to get a new driver transformer or a matching transformer to work in conjunction with the one you have. If you use a public address amplifier for a driver, one solution is to use a low-cost universal output transformer rated at 6 watts or more as a matching trans-former. With its primary connected to the grids of the push-pull 807s, its secondary (used as a primary) will match a wide range of output impedances such as are common to most p.a. amplifiers.

Whilst the device is in no sense a depth of modulation indicator, it does serve as an indicator of the level of speech laput, and has been found extremely useful in practice. It indicates for instance, how much background noise is getting on to the carrier, and shows readily whether the operator is speaking the correct distance from the microphone

MODULATOR CONSTRUCTION There is little to say regarding construction of the 807 modulator. In the writer's case, speech amplifier and modulator are separate units, the 807 driver transformer being placed on the mod-ulator chassis, and a short length of screened cable connects the output of the 6L6 with the driver transformer primary. With this arrangement the speech amplifier can be placed on the operating desk with all controls at one's finger tips, and no noticeable distortion results even when the length of connecting cable is 10 feet. Another advantage is that the chances of r.f. feedback are minimised when the speech amplifier is placed at a distance from the r.f. stages

THE DRIVER TRANSFORMER

A driver transformer having a Stepup ratio is required for the modulator correct ratio being easily calculated if or valves is known, the required turns

Practical Design for Speech Amplifier

Using the preceding data as a basis, a straight-forward three stage speech amplifier was built up, and as can be seen from the circuit diagram (Fig. 4). it is quite conventional and free from frills. A "speech level indicator" was incorporated in the amplifier, for reasons explained later, and uses a magic-eye valve and double-diode triode amplifier. This feature can be omitted from the speech amplifier without any detriment to performance.

The first valve, a 6J7, is a normal high gain voltage amplifier with provision for crystal microphone input, resistance capacity coupled to a 6J5 which drives a 6L6 in Class A as a modulator driver. As mentioned previously, the load presented to the driver stage is more or less constant in this circuit, and it has been found that a 6L6 connected as a tetrode, with 350 to 400 volts on the plate, will drive the 807s to approximately 100 watts output, with negligible distortion on speech input

With the voltages indicated, and correct matching to the 807 grids, the 6L6 can be driven to give an output of 6 watts, which will be ample to obtain up to 100 watts from the 807s.

SPEECH LEVEL INDICATOR It was decided to make use of the

magic eye on the panel as a speech level indicator. Audio voltage is taken from the 6L6

grid to the grid of a double-diode triode, the diodes of which are connected together. The amplified audio is then rectified by the dlodes, the exciting voltage for the magic-eye assembly being developed across a 1 megohin variable resistor R13 which forms a sensitivity control.

Thus on speaking into the microphone the magic-eye will close to an extent dependant upon the distance of the speaker from the microphone, the setting of R13, and the setting of the audio gain control R6.

In practice, after speech amplifier and modulator are connected to the transmitter, the sensitivity control is set so that when 100 per cent. modulation is taking place, the magic-eye just closes.

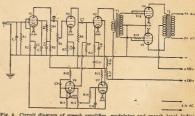


Fig. 4. Circuit diagram of speech amplifier, modulator and speech level indicator.

R1-5 megohms. R2, R7-1,500 ohms, 1 watt.

R3-1 megohm.

R4, R9, R10-250,000 ohms, 1 watt. R5, R8-50,00 ohms, 1 watt. R6, R13-1 megohm volume control.

R11-2,000 ohms, 1 watt. R12-220 ohms, 1 watt.

R14-3 megohms. R15-2 megohms.

R16-20,000 ohms, 10 watts. R17-3.500 ohms. 5 watts. R18, R19-20,000 ohms, 1 watt. C1-50 pF.

C2, C6-10 uF. 25 volt working. C3, C10, -0.1 uF.

C4, C11-8 uF. 400 volt working C5, C7, C9-0.01 uF.

C8-25 uF. 50 volt working.

V1-6J7

V2-6J5

V3-6L6 V4, V5-807.

V6-607. V7-Y61

T1-Class B driver transformer (see text)

T2-Modulation transformer. J-Open circuit microphone jack.

ratio being the square root of the ratio of driver load impedance to the grid impedance of the 807s. With the Class A 6L6 used as shown, with cathode bias, 300 volts on the screen, requiring a load of 4,500 ohms to realise the full output of 6.5 watts. This latter figure is taken from the published characteristics, and does not, of course, take into account transformer and other losses. In choosing a driver valve or valves these losses should be borne in mind, and it is as well to budget for a driver stage which will deliver 15 or 20 per cent, more audio than is theoretically required for any given output.

A driver transformer is thus required which will match a 4,500 ohm impedance into 14,000 ohms. The impedance ratio of the transformer will therefore have to be 1: 3.2, making the required turns ratio 1 : 1.8. i.e. the square root of the impedance ratio. A normal Class B transformer will serve the purpose with primary and secondary reversed, assuming the transformer has a centre

Such transformers seem difficult to come by, as the usual driver transformer for Class B and AB, amplifiers. although having a step-down from primary to secondary, invariably has an untapped primary. If any difficulty is experienced in obtaining a transformer of the correct step-up ratio, two 5 or 6 watt universal output transformers offer an alternative arrangement: the low impedance winding of one, carrying the output of the driver valve, being connected to the low impedance winding

on the other transformer, the secondary of which is connected between the 807

By experimenting with the adjustable primary taps, it will thus be possible to arrive at a correct match between the driver and modulator.

The writer was fortunate to obtain a ; 2 step-up transformer from a piece of ex-service equipment. It originally functioned as a modulation transformer matching a pair of 12A6s into an 832, and worked perfectly as a driver transformer when using the 6L6 driver, despite the small discrepancy ratio. (Sounds like a 522 modulation transformer-Ed.)

As a matter of interest the writer has driven the 807s in Class B using a 6F6 driver, with 290 volts on the plate, preceded by # 6J7 and 6C5, and a crystal microphone. With this set-up an 80 watt carrier was modulated 100 per cent. with the audio gain one-third advanced The driver transformer used to match the 6F6 into the 807 grids was a 1:1.4 step-up. The anode voltage on the modulator was 700 volts, the same transformer being used to supply h.t. to the Class C r.f. stage. Conditions of operation in this case were not at all favourable as the regulation of the power supply was none too good, and yet reports received indicated that the speech quality was really excellent, there being no trace of distortion. One or two stations have been heard

on the air complaining that they have been unable to obtain the expected output from the Class B 807s, but in every case it has been evident that the wrong conditions were the cause of the failure

Once the simple principles of matching the driver stage to the modulator grids have been grasped, and the correct step-up ratio of the driver transformer has been obtained, the audio output is limited only by the 807 plate voltage and the amount of voltage swing obtainable at the grids If the modulator has been converted

from the usual Class AB, 807 circuit it should be borne in mind that whilst the required driving power for AB2 operation is 0.2 watts, at least 5.3 watts audio will be required to obtain the full audio output from the 807s in Class B OPERATING DATA WITH LOWER
PLATE VOLTAGES

Perhaps the constructor has a 500 or

600 volt transformer which he would prefer to use with the 807 modulator. A power supply incorporating such a transformer will enable the 807s to deliver an output of from 70 to 90 watts. A set of operating conditions is therefore appended for plate voltages of 500 and 600. As the average plate current in each case works out at about 240 Ma., the secondaries should be rated for at least 300 Ma. working current, otherwise, apart from the risk of a burnt out secondary, the voltage regulation will be inadequate to cope with the large plate current swing. It should be noted that for each set

of operating conditions, grid driver requirements remain the same, in order that maximum audio output may be obtained for each plate voltage figure.

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HAMS TO THE RESCUE!

RADIO AMATEURS HELP SEARCH FOR BABY

Four Amateur Radio Operators in Gippsland and North Essendon (Vic.) guided a search party of nearly 500 farmers and police in their hunt for a baby boy who was lost all night in the hush, several miles from Maffra on 9th July,

The baby was Peter Daly, aged 2, who strayed from a truck while his father was cutting timber in rugged country cut by gorges sometimes 200 feet deep.

Early on Saturday morning the Maffra police, who had been hampered by lack of communication between the search parties, enlisted the aid of the W.I.A. Emergency Network—Eastern Division.

Keith Scott (VK3SS), Jim Long (VK3AJL), and Ossie Kellas (VK3AHK) arranged a net as follows: 3AHK base station at Tinamba with landline communication with Maffra Police Station, 3SS and 3AJL portable. This arrangement rendered communications between the two search parties and Maffra Police via SAHK.

With this efficient set-up the Police in the bush search party soon realised that more speedy communications with Russell Street (D24) were necessary and would be obtained if a station in Melbourne could be contacted to work direct with 3SS.

3AHK put out a "CQ Melbourne rgent" call and Mr. Ellis Pottage (VK3JP) made contact and passed on a message to Reg Busch (VK3LS) to take the Melbourne end on the Emer-gency Frequency of 6984 Kc.

With this arrangement messages between the field search parties and D24 were handled in a matter of seconds until the search was successfully con-

It might be pointed out that D24 readily accepted the communication facilities and passed their regards for

the assistance given by Amateur Radio. For those interested in portable work in general, and emergency communications in particular, a description of the equipment used is as follows:-

VK3SS.—Portable with search party No. 1 used a Type 3 Mark 2 Transceiver. cathode modulated with 6V6 audio amplifier: antenna a single wire attached to nearby tree. This station was situated in dense bush.

VK3AJL.-Base station using Type 3 Mark 2, cathode modulated; later transferred to field party No. 2 using a 108 Transceiver used as a Walkie Talkie with attached whip antenna.

VK3AHK.-Base station used a Type 3 Mark 2. cathode modulated. Single

VK3LS.-Home station, 6V6 crystal oscillator, 807 p.a., plate modulated with p.p. 6V6s, antenna half-wave horizontal.

AMATEURS AGAIN ASSIST IN NORTH COAST FLOODS Several of the North Coast (N.S.W.) Amateurs did some fine

emergency work during the devasting floods that swept the area during mid-June. With little warning Amateurs found themselves in a position where they could serve the community by supplying emergency communication.

An outstanding effort was that of Norm Carpenter (VK2RK), of Mur-willumbah. On 14th June, while the evolone was at its height, it appeared as its aerial system or the power system woud fail. In view of this happening, VK2RK arranged announcements to be made over the broadcast station to the effect that VK2RK would broadcast on 7 Mc. in the event of any failure. The inevitable happened, the power failed and VK2RK opened up on 7010 Kc. and for four hours broadcast flood bulletins supplied by the local flood committee. These were made at 10 minute intervals.

The transmitter was run from a battery p.a. system used as a modulator, a local radio dealer coming to 2RK's assistance for the latter. Congratulations to Norm on a job well done

Down in Maclean VK2OE was requested to stand-by by the local post-master in case of emergency, which fortunately did not eventuate.

VK2GI, at Woodford Leigh on the Clarence, was without power for days. The diode monitor was converted to receive the local broadcast station and the

On the lighter side-2LH found motor cars and refrigerators on his property. 2NY had the doubtful honor of seeing his QSL cards floating in five feet of water in his shack. 2XO's gear was rapidly stored in the garage roof.

Actual damage to equipment was small and from all accounts radio gear had a high priority in removals-sometimes ahead of furniture.

All the North Coast gang stood by for hours to see if they could be of any assistance.

Peter Alexander (VK2PA), North Coast Zone Officer, who supplied the above news, also reports that a very strong move is under way to organise a battery operated net to come into operation in any future emergencies.

MELBOURNE EMERGENCY NETWORK

It is proposed to develop a Melbourne Emergency Network which will be capable of rendering assistance within radius of approximately 50 miles of

If you are interested write immediately to the Divisional Organiser of Emergency Communications, Law Court Chambers, 191 Queen Street, Melbourne. giving the following particulars:

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METERS .- All types. R.F. Thermo Couple, 0-35 Millamp.

FILTER CHOKES AND CONDENSERS, RESISTORS, VARIABLE AND FIXED.

VALVES NEW ! VALVES NEW! VALVES NEW!

WE SUBMIT THESE PRICES FOR COMPARISON

807's 10/-	5U4 10/-	6L7 10/-	VS68 7/6
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	105 10/-	. 12507 10/-	VS70 7/6
6AC7 10/-	1A5 10/-		
1852 10/-	1K4 10/-	6\$\$7 10/-	VR65 7/6
6H6 10/-	1P5 10/-	EF50	VR66 7/6
801A 10/-	OA4 10/-	VR91 7/6	VU139
3B24 10/-	1286 10/+	VT61 (RK34) 7/6	VU111
5V4 10/-	6F8 10/-	VP41 7/6	VU39 7/6
314 10/-	070 10/-	AL41 1/0	Amaa 1/0

Hammarlund Tuning Units, M.O. and P.A. Stages, full of condensers suitable for rig. Can be split statored. In small rack size container Standard Notes for Wireless Maintenance Mechanics, including Bendix, A.T.5., A.R.8, etc.

Inspect all these items at

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16 Swan Street . . . Richmond

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QUESTIONS AND ANSWERS

Our thanks to all who have sent in answers, or who have located people with the answers. You are doing a good job, thanks a lot. In common with other magazine correspondence, the address of this column is now "Q. and A.," "Amateur Radio," Law Court Chambers, 191 Queen Street, Melbourne, C.I.

A.1—As you saw last month, VK3ASG came good just as we were going to press. Since then he has sent in more information as follows.

"Considering the purpose for which is line was originally designed, the velocity figures compare very facing the velocity figures compare very facing the based of the velocity figures compare very facing the based nimitation especially designed for rf. work. Laboratory tests have shown Nylex for to work well as feeder—up when the findings of anyone who has conducted tests with Nylex on higher frequencies. Many are using Nylex to feed quencies. Many are using Nylex to feed the Nylex State, State, 370 and 371 cituding Nylex State, 372 and 371 cituding Nylex State, 372 and 372 cituding Nylex State, 372 cituding Nylex Stat

"Measured at 45 Mc. the velocity factors are:—

Colour			- V	510¢	ity ractor
Blue		fri-			0.7
Black					0.69
Red					0.76
Brown					0.71
White					0.696
Yellow					0.658
Clear	**				0.000

"At this juncture I would like to extend my sincere thanks to Mr. T. L. Martin, of Noulded Products Ltd., for his laterest in having this information collated. Mr. Martin advises, in response to enquiries, that the sole distributors of Nylex Cables are A.P.I. Cables and Insulation Pty. Ltd., Melbourne."

A3.—This seems to have the boys tricked. 3VZ, the Technical Editor, politely declined to comment. When the question was raised in other quarters the standard answer was "It all depends;" but as to what it all depends on was rather obscured in the resulting argument.

So your scribe suggests that the quickest way to find out is to measure the impedance.

simplest way of doing same would seem to be to set the 807 going with normal plate voltage and drive, then to measure the screen current as the screen voltage is varied, say in 25 volt steps from the initial 150 volts. This should be taken far enough to include the full voltage swing of the screen on full modulation If the screen current is graphed against screen voltage, then the tangent to the graph at 150 v. is the a.c. screen impedance. Also it will be obvious as to how constant this impedance is over the voltage swing. This process is really the same as measuring the plate resistance of a valve except the screen resistance is wanted here

A.4.—From VK4FM, VK3FW, VK2CS and C. B. Fisher we have this information on the 280/80. It is really four voltage regulators in one, having four anodes and a common cathode. Socket: 5-pin English

Other designations: VS69 or CV1069.

Pin			Voltage	Regulat's
1	Anode	4	+282	5%
2	Cathod		0	
3	Anode	2	+143	10%
4	Anode	3	+205	7%
5	Anode	1	 +73	15%
77 1				

rating of 40 Ma and the cathode current, which is the sum of all the anode currents, must not be greater than 80 Ma. Unused anodes should not be left floating but connected by 100,000 ohm resistors wither to earth or to B+, the anodes of higher voltage than the ones used being taken to B+ and those of lower voltage to earth. The striking voltage is 363 volts.

A similar tube is the 280/40 which has the same socket connections and operating voltage, but each maximum anode current is 30 Ma. and maximum cathode current is 60 Ma.

NEW QUESTION

Q.5.—A lot of disposals v.h.f. gear is described as operating on such and such a band. Can anyone supply the frequencies corresponding to G., L, L, and P. bands? Also, for interest, any other band frequencies you know.

A TECHNICAL TIDBIT

That new final of yours has just been completed, and you anxiously throw the high voltage on, and dip the final plate high voltage or, and dip the final plate in the antenna, again dip to minimum plate current, and finally make sure that you have maximum redatation from the antenna by checking with a neon build final plate conferent. In this simple operation you have passed over several final plate conferent in this simple operation you have passed over several points which will inform you as to how the final and the feeder system is when the plate current is diposed to when the final and the feeder diposed to the control of the plate current is diposed to when the final several plate current is diposed to

a minimum value with no load on the

tank coll, make a mental note of the final tank condenses acting. Now final tank condenses acting. Now final tank condenses of the connection of the same dial setting as and again time the tank condenser for minimum plate current. If the condenser is not on the same dial setting as the condense of the condense of the that is, the line is not flat. On the other hand, if the loaded minimum plate setting as the unloaded minimum plate current you may or may not have standing waves on the feeder system. settings will be the same, but the fact that they are the same does not necessarily imply that the line is flat. It will be/necessary to check the line by other methods to guarantee the absence of standing waves.

assume the second secon

loaded plate current depend upon the power factor and the impedance in the final tank circuit. Zero power factor and maximum impedance occur logether and maximum impedance occur logether occur to the control of the c

If you operate with minimum loades plate current, you effectively lose power output due to poor plate-circuit efficiency in the power output due to poor plate-circuit efficiency is low and it is not possible to obtain full use of the tubes. Obviously, therefore, it low and it is not possible to obtain full use of the tubes. Obviously, therefore, it loaded plate current and maximum power output occur at the same sotting reason to make sure that you have a long the plate of the plate

matter to remedy. Add capacitance across the final tank coil, removing turns from the coil as you go, until you have sufficient capacity to make the two points mentioned above coincide. Too high a value of C will cause his circulating current in the tank coil, but this will not occur unless you add a great

this will not occur unless you add a great deal more capacity than is needed to get a high Q tank. Once you have the minimum loaded

plate current and maximum power output fixed, these two points will be aneaparable, regardless of your feeder with the plate of the pla

not guarantee that the line is flat, and separate tests must be made to verify that point.—"Ham News," April, 1948.

Amateur Radio; August, 1948

CONTEST NEWS

REMEMBRANCE DAY CONTEST 1948

The Remembrance Day Contest is to be an Annual Contest to perpetuate the memory of those Australian Amateurs who gave their lives for their country during World War II. It is to be held during the week-end nearest to the 15th August in each year-the date on which hostilities ceased in the South West

A handsome Perpetual Trophy will be awarded annually for competition between States, and will be inscribed with the names of those who gave their lives, so perpetuating their memory throughout Amateur Radio in Australia. The name of the winning State for each year will also be inscribed on the Trophy.

RULES

1. The contest will commence at 1800 hours E.A.S.T. on the 14th August and continue through until 1800 hours E.A.S.T. on the 15th August, 1948.

2. The Contest is open to all Australian Amateurs, but only members of the W.I.A. are eligible for the awards

3. The Contest is an open contestc.w., phone or a combination of both may be used.

4. The Contest is an Interstate Contest, and Amateurs in each State will endeayour to contact Amateurs in all other

5. A station may be operated by more than one operator provided that a separate log is entered for each operator under his own call sign. 6. All present amateur bands may be

used, and all transmissions must conform with the regulations as laid down in the P.M.G's, "Handbook for Operators of Amateur Wireless Stations," January, 1948. Any breaches of these regulations will lead to the disquali-fication of the station concerned.

7. The arranging of schedules for contacts on other bands will not be permitted.

8. All stations entering the Contest will call "CQ RD" if using c.w. and "CQ Remembrance Day" if using phone. 9. A State competing for the Trophy

must submit a minimum of six (6) logs from members before becoming eligible for contesting the Trophy

10. Only one contact per station per band is permitted.

11. Each participant shall assign himself a three figure number. When more than one operator operates the same station each must assign himself a separate three figure number

12. The exchange of serial numbers shall be the same as for the last DX Contest. The first three figures are those chosen in Rule 11 above and will be retained by the station throughout the Contest; and the second three numbers will commence with 000 for the first contact and for subsequent contacts will be the first three numbers of the station of the previous contact. A complete exchange of signal reports must also take place before any points may be claimed for the contact

SCORING

13. In order that an equitable distribution of points for States with a large number of contest stations to a State with fewer contact stations may be determined, a sliding scale of points has been allotted as shown in the Table

appended. 14. In addition to the points in the Table that may be scored, a bonus of 25 points may be added to the total score for each State worked on 50 Mc. or above.

LOGS

15. The log submitted must show in the following order: Date, Time (GMT), Station Worked, Band, Type of Emis-sion, Signal Report Sent, Signal Report Received, Serial Sent, Serial Number Received, and the Points Claimed. A statement signed by the operator must be attached at the conclusion of the log showing that the regulations (see Rule 6) and these Rules have been observed Any logs departing from this form will be automatically disqualified.

16. All logs must be forwarded through the Contestant's Divisional Council, to reach Federal Executive. Box 2611W G.P.O., Melbourne, on or before the 6th September, 1948.

AWARDS

17. Attractive certificates will be awarded to the First, Second, and Third Highest Stations in each State There Where a shall be no outright winner. large number of logs are received from any one State, further awards may be made at the discretion of the Contest Committee

18. The State to which the Perpetual Trophy is to be awarded shall be determined by the highest average score of the first highest six (6) logs (as mentioned in Rule 9) in each State 19. The Trophy will be forwarded to the winning State in its container and will be held by that State for a period of 12 months until the winner for the following year is determined. Further

details on the forwarding of the Trophy etc. will be given later
20. The Contest Committee shall be the sole adjudicators, and their ruling

shall be binding in the case of any dispute

Judging by the number of logs reperved, far fewer stations participated than was hoped, but those who did take part enjoyed it to the full. It was unfortunate that another contest was being conducted by the N.Z.A.R.T. and this coincided with the Trans-Tasman. The numbering system was not the same and did cause some confusion and this must universal system of exchanging numbers. Then should two contests be run at the same time, only one set of numbers need be exchanged. In addition to the list below, a couple

RESULTS OF 1948 TRANS-TASMAN

of check logs were received. AUSTRALIA

Open

VK7AB .		***	1728	Points					
VK4XJ			504	12					
VK3HG .			480	18					
	C	.w.							
VK2QL	200		1296	Points					
VK3UM			510						
VK3ZC			432	"					
VK4JF			72	81					
VK4RC			72	"					
VK3XB			36						
Phone "									
VK2CI			912	Points					
VK3QK .			27						
NEW ZEALAND									
NEV	Y Z	EAL	MAND						
Open									

ZL3HC 2204 Points

Z£1MR

BH				34		21	
KU		44.		14	14	91	
HC		Ph	one				
	** *					oints	
HJ				1;	05	33	
the but	ab.	2001	de e	200	1000		

1764 Points

from VK2RA some time after the closing date and it is regretted that it could not be accepted.

HARMONICS Heard on the broadcast band in W.A.

recently. The announcer on a commercial broadcast station was concluding a daily request session for a repatriation hospital. The sign-off went something like this-

"Well, that's all for today, but we'll be back again tomorrow at the same time when we'll call Ward Numberlet me see, what Ward do we call tomorrow" (fumbles among some papers on announcer's desk), "I think it's here -QRX a moment, will you!

You're right! That announcer was a Ham-in fact it was VK6ND

NOTE.—Read the Table

TABLE

					TO					from Left to Right for
	VK	VK2	VK3	VK4	VK5	VK6	VK7	VK9	Total	points for the various States, e.g. a VK2 scores;
	2		1	2	3	5	4	6	21	1 pt. for VK3 contact.
	3	1	-	3	2	5	4	6	21	2 pts. for VK4 "
Š	4	1	2	_	3	6	5	4	21	3 pts. for VK5 ,, etc.
Ŀ	5	Z	1	3	-	5	9	В	21	a VK6 scores
i	6	1	2	4	3	-	5	6	21	1 pt. for VK2 contact.
	7	2	1	4	3	5	-	6 -	21	2 pts. for VK3 "
	9	1	2	3	4	5	6	-	21	4 pts. for VK4 etc.



EDDYSTONE AMATEUR BANDS COMMUNICATIONS RECEIVER MODEL 640 BUILT LIKE A BATTLESHIP

Check these outstanding features:

Rocs.ver has been designed primarily for Amateur Communi-tion purposes, tuning range from 31 Mc/s to 1,7 Mc/s.

- Designed to operate from Standard AC Mains with Inputs of 210 volts 200/240 volts, 40/60 cycles as well as from a 6 volt battery by the use of a separate vibrotor unit.
- Including all volves the "640" is a 2-velve loc with one RF staps. FC. Sets IE and "640" is a 2-velve loc with one and the staps. FC. Sets IE and the staps of th
- TUNING RANGE—(1) 31 to 12.5 Mc/s. (2) 12.5 to 5 Mc/s. (3) 5 to 17 Mc/s.
- TUN NG. An electrical band-spread arrangement is used for this purpose. Fly-wheel control is utilised on the band-spread condenser drive. The scale is clearly marked with all emateur bands, and is so arranged to enable occurate re-setting to a
- 6. I.F FREQUENCY-1600 Kc/s.
- CRYSTAL FILTER is vacuum mounted to provide a high degree of stability. Phasing control and "in/out" switch are brought of stability Phasing a
- Sensitivity is better than 2 microvolts input, for 50 milliwatts output, at all frequencies.
- OUTPUT. Audio frequency output exceeds 3.5 wotts. "S" METER. A socket is provided for an external "S" Meter.

The Eddystone 640 gives you everything you've ever wanted in a receiver. It gives it to you right from the start. It's performance, particularly on DX, is outstanding, and experienced DX men agree that the 640 has a signal to noise ratio superior to anything on the world's market to-day. This is proved by the large number of 640's now being sold in the U.S.A. to the complete satisfaction of their owners. And yet the 640 costs only £72 nett (also available on terms). You could work for ages on an inferior set, spend every bit of £72 and still not achieve the thri-ling performance of the 640. It gives you value for every penny. There's only one way to prove it and that's to try it. See your local distributor right away—he will be glad to arrange a demonstration.

Contact your local Distributor NOW

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- S.A.: GERARD & GOODMAN LTD...
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Australian Factory Representatives: KEITH HARRIS & CO. PTY. LTD., 51 William St., Melb. MB 2119

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FEDERAL, QSL and DIVISIONAL NOTES

Federal President,-W. R. Gronow, VK3WG, Federal Secretary.-W. T. S. Metchell, VK3UM, Box 2611W. G.P.O., Melbourne.

NEW SOUTH WALES Secretary,---Wai New (VKZXL), Box 1734, G.P.O., Sed-Meating Night,-Fourth Friday of each month ence House, Corner Gloucester and Essex Sts.

Bivisional Sub-Editor.—R. Davi 209 Cherno Street. Coppet
Zone Cerspondent,—North Coast and Tablelands:
P. A. H. Alexander, VGZPA, Mill SJ. Post ManSJ. Harn Irn, Nescastip, Castlinels and Ham
H. Hankins, VKZPL, 27 Comfort Ave. Cesmock,
Watter S. P. Rossel, VGZQA, 118 Beagn St.
Reprint VKZDO, 42 Peth 15, Yass, Southers,
E. N. Ampli VKZDO, 63 Formst Mill Ave.
E. N. Ampli VKZDO, 63 Formst Mill Ave.

Administrative Secretary,--Mrs. O Cross, Law Court Chambers, 191 Queen St., Melbourne, C.1.

Meeting Night.—First Wednisday of each month at
the Radio School, Melbourne Technical College. Zone Correspondents.-North Western B

VK39M, Quambatook, Western C C Werng VK3YW, 12 Skene St Stawell, South Western B. Sectrine VK381, 7a Ragian Street North Salarat North Fastern D Tarry VK3PW IS 8. Softrine YRJSBI, I'A Region Street North Se larat, North Eastern: D "Borry, VKJDW, IS Harold St., Shepparton, Far North-Western Zone: Harry Dobbyn, VKJMF, 42 Wainut Ave, Milloura, Eastern Zone: J. D. Chilver, VKJDB, 20 Swith St.

INCOMPANIES OF

All Anateurs are urged to keep these frequencies clear during, and for a period of 15 menotes after, the off-cial Broadcasts. WYTWI -- Condend 1100 house ECT 7100 Ke and 2000 hours EST 50.4 Mc. No fre-markey checks are available from VICZWI

VICINIL—Sundays, 1130 hours EST 7196 Kg Spot frequencies every fourth Tuesday, between 2000 and 2200 Kc. every 10 Kc. Individual frequency checks of

Stations given when VK3WI is on the air

VK4WI —Sundays, 0900 hours EST simultane-ously on 7109 Kc., 14342 Kc. and 52 004 Mc. Prequency checks are given two rights weekly, and the hours are an-nounced during the Sunday broadcasts. VKSWI.-Sundays, 1000 hours SAST on 7196

NVI.—Sundays, 1000 hours SAST on 1776 Kc. Frequency checks are given by VKSDW on Friday evenings on the 7 and 14 Mr. hands VK6W? - Sat 2 p.m. Sun, 2:30 mm. W.A.S.T. between 7000 kc, and 7200 kc. No frequency

checks available VKYWI.—Second and Fourth Sundays at 1030 hours EST on 7174 Kc. No frequency chocks are available

Secretary.— G. G. Augustenen, Box 8361, GPO Brisbezel. Meeting Night,—Last Friday in each month at the State Service Building, Elizabeth St., City. Divisional Sub-Edifor: H. J. MacGregor, VK-EL, "Moount." Eldon Rd., Windoor

SOUTH AUSTRALIA Secretary.—E. A. Barbier, VKSMD, Box 1234K, G.P.O. Meeting Night —Second Tuesday of each month at 17 Waymouth St., Adelande Divisional Sub-Editor,—W W Parsons, VK5PS, 483

Esplanade Henley Beach WESTERN AUSTRALIA

Secretary.—W E Coxon, VK6AS, 7 Howard St., Perth Maeting Night.—Second Monday in each month at the Builders' Exchange, St. George's Terrace,

Divisional Sub-Editor. -- VK6WT, Mr D. Couch, Mary Street, Wetermans Bay, W. Austra is TASMANIA

Divisional Sub-Editor.-T Connor, VX7CT, 185 E. rabeth Northern Correspondent.—C. P Wright, VK7LZ, 3 Knight St., Launceston effectively monitor them for the purpose of elimin-

FEDERAL DX C.C.

Applicants for any one section of the DX CC Applicants for any one section of the DA col-need not again submit cards already submitted in respect of an application for another section. All applicants cards submitted are recorded with the lecometry details by the Awards Committee. Cer-tificates for the undermantioned have been fasted through Divisional Councils.

C.W.

1 K2QL (18) .. QPEN VR2DI (2) VR8M2 (5) VR3HO (4) VR3KX (1) VK3MC (6) VK8KX (1) VK8KC (0) VK2YL (17) VK4ZL (17) VK4ZL (18) VK4KR (18) VK4KR (1) VKIACX (%)

CERTIFICATES

We are pleased to amounts at long last that outstanding certificates for Contests, etc., have been laward by Federal Executive to Divisional Councils. Overswar certificates have also been forwarded Membership certificates are new being prepared for anue to Divisions

CONTESTS

Contests to the instead the found the Students to the 1948 Reasonbractor Day Crestes. We urge that the property of the third state of the 1948 Reasonbractor Day Crestes. We urge that years are to the contest of the third state of the third state of the third state of the third state. The third state of third state of the third state of the third state of the third state of the thi

this Contest your support and near us to publicine it P.M.G. REGULATIONS.

We have been notified by the P.M.G's. Depart ment that the first amondment to the "Handbook for Operators of Amateur Wireless Stations" January 1945 is now printed and may be obtained on application to the Department.

___ SILENT KEYS ____

WELL KNOWN DX MAN. News has been received of the passing of XELAN, ex-X9s, who operated mainly on cw., was widely

Howard Love, VKIKL .-- We regret to ansounce like sudden passing of H. K. Lore, VK3KU, at his home, on July

When operating portable, telegraphy stations has use an oblique and the prefix number of the State in which they are operating, a.g. "/fi." The Department have also agreed to issue temporary VKI calls to special services including Amster Matsons attached to Expectations of National Interest, tools attached to Expectations of National Interest, tools

AVOIDABLE INTERFERENCE

The Chief Impector (Wireless) has expressed concern at the deplorable amount of avoidable "Between Station" interference existing on some of the more popular Amateut hands. The interference is brouger about by the fa are of many licenaeus is diverged about by the 12 are of many aperants to observe the instructions contained in paragraphs 110, 138, 136, and 157 of the Hambook for Operators of Amateur Wireless Stations '1948 I niess appreciable improvement in this regard is noted in the near future, the Department may be forced to take apprepriate action against offenders.

110. Except for brief tests or adjustments, or in the authorised bands from 164 Mc. upwards, an Station Licensee must not cause a carrier Associate Nation Licensee must not cause a carrier wave to be emitted from his transmitting equipment tinions such wave is subjected to intelligable modula tion. Prelonged tests or adjustments in the author-ised frequency bands below 144 Mc, must be made on an artificial aerial

133. The use of prolonged calls causes considerable interference with other Amateur Station

Licencees working in the same frequency band and does not improve the caller's chances of establishing be avoided

136 Sefore beginning a call, an operator must
adjust his receiving apparatus to the highest degree
of essaticity and listen on the frequency he proposes to use to make sore that he will not interfere
with other elations emgaged in communication on
or adpress to that frequency. He must also ensure that his transmitted signals are well within the Ameteur frequency band he is using, and shall

pursous radictions.
The transmission of any signals, two revessar; for the conduct of experiments or conversation is absolutely prohibited, trials and practices are fun-bidden except in such circultatastees as will preclud-tion possibility of interference with other stations. The Pederal Basequites expect y reposing all The Pederal Baseutive carnetty requests all vagon tuents and thereby avoid unpleasant conse-quences and, at the same time, improve conditions for both yourself and your fellow Amateurs.

ating spurious radiations.

AMATEUR CALL SIGNS New Issues.

SKSABL-R. W. Thurley, Lovedale Cottage, Stewart Ave., Horseby 3ABW—K. W Ford, 20 Augusta Rd., Manly 2ABX—E. C. Gibsen, 127 Maitland St., Ocn

nedsh.

1AJP-J Wenver, 17 Coremandel St., Genbarn
2AJP-J Wenver, 17 Coremandel St., Genbarn
2AJW-Welloogeng Amster Radoo Olib. Co. 2AMW—Wollongeng Amateur Radio Cuto, tyo Technical College, Wollongong 238—J. M. Roberta, 12 Nicholas Are, Campue 20X—J. Stephenson, 152 Fullerton St., Stockton 247—A. Stephenson, 152 Fullerton St., Stockton 215—H. C. Radder, S Flizzro St., Unmore 215—4. T. Nebb, 37 Farkes St., Liemore

21 C - 4 T. Webb, 37 Parkes St. Likemore.
21 L E J. Morrison, 46 Olola Ave. Vaaduee.
21 S J. Sterfee, 79 Hamburg St. MayBeb.
21 S J. Sterfee, 79 Hamburg St. MayBeb.
21 S J. Sterfee, 17 Hamburg St. MayBeb.
21 S J. Sterfee, 17 Hamburg St. MayBeb.
21 S J. Sterfee, 18 Hamburg St. MayBeb.
21 S J. St. St. Sterfee, 18 Hamburg St. MayBeb.
21 S J. St. St. Sterfee, 18 Hamburg St. Sterfee, 18 J. Miller, 116 Kendull St., Ownr.
22 S J. St. Sterfee, 18 Tomer St., Wet

Kempsey Troughpar, 129 Kings Rd., Lambion
22Y-W tumpbe J. Box 57, P.O., Murwillimbea
VESASF-A Roomson 148 Raymond S. Sele,
3ABX V J. Bond, Bogong, & Wonsen,
3AIG-N. H. Sellman, Box 98, Merbelle, via

30M-B G Selman, 55 Bourke Cress, Greening, SiM-Q W Porter, 51 Pakington St., Kew 3RM-E W. Easterbrook, 37 Robert St., Bent

Amateur Radio, August, 1948

VK5SA-W. S. Moore, 171 Thomas St., Sublace 6BP-E J. Thornton, Lot 92, Tourak Rd., South Belmont.

ECD—W. P. Dawson, 124 Forrest St. East 6CD-W. P. Dawson, 124 Forrest St. East Frammule 60K-C. M. Hayes, 20 Rimberley St., West Leederville 60W A. W. Hawkaworth, Lot 40, Butcher St., Bruce Rocks. 61R-d. H. Rooger, 50 Landadowne Rd., South Perth.
W. S. Morrison, 20 Main Rd., Moonah.

FEDERAL OSL BUREAU RAY JONES (VKSRJ), MANAGER

An interesting visitor to the July meeting of the Victorian Division was Lt. Terry Maddern, ex VUECC, who is been cannot be a view to settling in this country. Terry, when called those to relate some of his Base experiences in modestly declared that anner from coming a

Low Drift Crystals

AMATEUR BANDS

ACCURACY 0.02% STATED FREQUENCY

3.5 M/C and 7 M/C Unmounted .. £2 0 0 Mounted .. £2 10 12.5 and 14 M/C Fundamental Crystels, "Low Drift" Mounted only £5. Spot Frequency Crystals Prices on Application Regrinds . . * . . £1 0 0 THESE PRICES DO NOT

INCLUDE SALES TAX. Maxwell Howden

15 CLAREMONT CRES., CANTERBURY, E.7.

15 watt transmitter with which he kept skeds with "Barma and Tibet," he had little else to relate Another interesting visitor to the asserting and to as many Ham shacks as his stay in Melbourne permitted was David Mitchell, ex-QW6AA and G2H. David is on his way to New Zealand on the "Athenie" and intends actiling in ZL and doubtless ere long we will have the pleasure of country with him under his ZL call sign. The Another interesting rigitar to the consting on GOURGIOSS EVE king we will have the please a contact with him under his ZL call sign, writer's QSL cards for contacts in 1933 and

card from a little known country recently came and. It was from PXIA in Andorra which the France and Some "The card also states: "I am Prance and Spain." The eard also states: "I am the sole Ham in Andorra. Any other PX stations heard are pirates" and solicits QSIs to go via Box 27-3. Chibohus, Mexico.

John Gorn (WESPG), who is getting more than his share of current DX, had the misfortune to have his pole and antenna carried away by the gales that beest our oldest State during the end of June. A card to hand from the expedition. "Gon Wikk!"
with the call sign shown as VPTNG, "In the
bountful Bilanana," bears the superscription "Now
W4XXX" but door not sale which of the three
powerators listed on the card now signs the latter

commission blief on the earl owe signs the latter black of the size of British Fig. Fig. 200. The control of the size of British Fig. 200. The control of the size of the size

For the benefit of new Hornsen the QSL set-up in Australian earn of government of the Australia is prompted and a service of the Australia is prompted and the Australia Aus in both (2) incoming to Australia and vets cords for W.A.C. and W.E. Certificates.

1K2 Bures. 78 Maloney Street, Eastlakes,

VK2 Barrat. 78 Maloney Street, Eastlakes, VSW, distributes for the South Males. VSW, distributes for Very South Males. VK5 Bureau: 8 Brook Street, Woodorwin, N.3, PK5 Bureau: 8 Brook Street, West Mitcham, SA., distributes for South Australia. VK6 Bureau: Sou Faile, O.P.O., Perth, die. tributes for Western Australia.

VET Buress 6 Thicas Street, New Town, Tuevana. distributes for Taxana Street, New York, Na-YKJ Bureau 20 Lucas Street, Caulfield, S.E.S. Victoria distributes for Victoria. Where applicable Victoria distributes for Victoria. Where applicable porace see that your State Manager always has a stamped addressed envelope on hand for you. This will help him and you too Outstand bound cords from V. Jorian Stations should be seen to 190 Thomas Street, Hampton, Vic.

Thomas Atret, Hampton, Vie.

A note to hand frum that old-timer Mart Chaffer,
owner of many varied call signs and now signing
NASHM discloses that Mart is as keen as ever and
is awaiting the completion of a new home in
Alliant. Until then his QTH is care 284., rictoria.

informs us that in a recent QSO with hitish Hendurus, he asked him to convey the that they would seem receive their to other the that they we outstanding eards from him.

NEW SOUTH WALES

thout 100 members attended the general meeti-the 25th June. The chief attraction for t thout 100 members aliended the general meeting no he 25th June. The cloth a strategies for the few misses of the property of the property of the Transmitter Department at N.A. He dealt crystal central extensive and a strategies of the control of the property of the prop

publication.

During the evening the President announced the abetton of the Gound for \$5.10 as follows: President for \$1.00 as follows: President follows: Pr

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MONTA ORAP AD TABLILLAND

FOR A STATE AND TABLILLAND

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Amateur Radio: August, 1948

FF or broadcast over the N.R.C. Dubbo has an-cher Ham, that makes six all active and as they er all sixing good gent the interference is not too and 2700 heard on 2 Me. with low power and overline all bands with excellent phone. 22W pre-ceding for higher power. 228 slways on 7 Me. hone or 14 Me. cw., 115 countries up. 21E has out a new two terminal y 4c. hear if is very

MOUTH COAST AND TABLELAROS
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job at Sandiana, 2JA, 2QE and 2ANQ are not active mainly owing to lack of time. Waggs is again behind the "iron startain" how short come

VICTORIA

At the July moral meeting the title on Description of the July was a series of the July was as well interested how the series of the July was as well interested how the series of the July was as well interested by the Series of the July was as well interested by the Series of the July was as well interested by the Series of the July was as well interested by the Series of the July was as well interested by the Series of the July was as well interested by the Series of the July was as well interested by the Series of the July was as well interested by the Series of the July was as well interested by the Series of the July was as well interested by the Series of the July was a well interested by the Series of the July was a well interested by the Series of the July was a well interested by the Series of the July was a well interested by the Series of the July was a well interested by the Series of the July was a well at the Series of the July was a well at the Series of the July was a well the Series of the July was a well at the Series of the July was a well at the Series of the Se

The sympathy of members of the Victorian Div-ion is extended to Bob Stevens (VESOJ) and erb. Stevens (VESJO) mon the recent loss of FREQUENCY MODULATION LECTURES

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Camel. Agrent 11—Wave Propagation and Aerials by O. M. Hedrary, D.A., AM.J.E. A.M.J.E. (Asal.)—Transmittees and Receiver.
—Transmittees and Receiver.
—September 14—Pulse and other methods in Residently by J. D. Champles
—September 14—Pulse and other methods in Residently by J. D. Champles
—Residently by F. O. Villaily Reproduction in Residently Brown and Camello Camello Company of the Adult Education Centre, and Floor, 114 Flinders Street (Camello 241) or at the first Record

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Gruntry members requiring loats of books, mag-ather (287; ed.) or instruments should consist the Administrative Screenery by telephones or write by Administrative Screenery by telephones or write post or rell, as graporieste.

A letture and semonstration with the Administra-tive state of semonstration or the consistency of A letture and semonstration or FM of the Administra-tive state of the Administration of the Administra-lations are according to the post-posed to the Interior I. It is place a demonstration of P M.O.s. FM. Receiver was given by Mr. O. Rowen, or the P M.O. Receiver was given by Mr. O. Rowen, many questions and cleared up many misconceptions of the reasons for and advantages of FM. The meeting greatly appreciated Mr. Brown's action in giving this lecture at such short notice.

FOOD FOR BRITAIN The Victorian Division "Food for Britam Patriotic Fund" has completed its 15th month of operations and has configired in that time a total of \$95 food parcels, which represents over a tun of tool, and till has a goodly financial position. The balance creek as at the 16th July, 1548, is as follows—

**Received The Complete Com

19 3 £311 15 Expenditure £203 4514 90



The recent raffle for the Mantel Model Radio The recent ruffle for the Mantel Model Radio Receiver realized the sum of £84/15/, and was wen by Mas M. Campbell, e/o T. & G. Building, Mildra, with tieset No. 27. Congardination, Miss (Amphel The Committee with to thank all those who on-ably helped with the sale of tickets, and to those who bought so many tickets! We have to those who bought so many ticketal We have no immediate raffle plans for the future but in the meantime, keep those docations coming in. Plesse erod any denations through your Zone Organisers or direct to "Food to Britain Fund," Box 2611W.

SUGGESTIONS OFFERED 1200 Malvern Rd , Malvern, Vic.

Editor, "A.R." Editor, "A.R."

I am, in the interest of the W.L.A, suggesting that a position be established for the organisation to have an organisar or a recenting offerer, all for the purpose of rounding up outsiders and "hanger one." I so not know if you are sware of the position or not but there is quite a number of some tion or not but there is quite a number of non-members who appearently are not giving my thought to the fact that they should become members to the fact that they should become members of the state of the state of the specialists in Group meetings plus the Hamfert and disposals I have noticed the same persons always in attend-ance for which they have no right and they have even obtained disposal gar six members.

The Wild is undoubtedly a union for the Am-nicurs, therefore being as such we should have an official created just like one as of a tradesman surious, a termin who could cause these become ometal created just rise one as or a transmission union, a person who could resursa these people with the object of selling W.I.A. membership. A good more one a sea be made this way, why not to m A O C P state the include the W.I.A. membership to the country. This would be a sure way bership in the course. This would be a sum only of preliting members in up to 100 miles. The sum of the course of

If such a position was brought about, I would compler it even though I am acting as monitor for the YAF 144 Mc, hand for 25 hours each work plus the notes in the magazine as well as compiler of notes at the meetings, and not for-

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getting the sorting out work for the disposal section of acting as doorman for our new social nights. In my position if I can find time to do all these jobs then I consider that the other members these jobs then I consider the their shoulder to the wheel as it seems a shame that your circular should have to appeal for volunteers from so must members

NORTH WESTERN ZONE Membars are reminded that the Zone Convention will take place during the last week-and of August, Saturday and Sunday, 28th and 29th August. The Convention will be held at the home of Raturday and atorcasy and Sunday, 28th and 29th August.
The Convention will be held at the home of truce Mann (VKSBM), Quanhaleok, Bruot's home a about lee miles from the tewn, and those attending the Convention should have no trauble in finding to the convention should have no trauble in finding to the convention should have no trauble in finding to the convention should have no trauble in finding to the convention should be seen from the same—Editor.) Bruon has supposted that in view II. (First mast can just about 00 wash from to-lown—Editor) Bruon has suppleted their in view of the wary large crowd expected, that it might be wise to bring along some badding with you for although there appears to be sufficient on hand to cover the multilude, a little extra would not go

Would those intention of attending this Communion, and intending to do so, please notify VK38M as soon as possible to that he can make suitable ar

CENTRAL WESTERN ZONE
The Cecital Western Zone Convection will be held at Homham on Sunday, 18th September, after-noon and evening. It will take the form of a 50 Me. Field Day during the afternoon, a dinner at night, followed by amust meeting, a technicat talk and (we hope) some technical films. The Zone will and (we hope) some technical films. and (we hope) some technical films. The Zene will be pleased to welcome any members of Council who could make the trip or any other Hamas who may be interested; 50 Me experts swould be particularly welcome as v.h.f. has not had enough practical application in the Zene as vel uthough there is plenty of interest. Any visitors requiring accommodation at Hernbam should contact VSSTA who mountees at measure sound contact vasia was will be only too happy to arrange same STT is still enjoying the undoubted benefits of the local do: supply The other night the powers that be recessed the polarity of the mains for half the night. All of Bill's electropytics violently ob-

the negative and earth the buttery charging so why worry? SARM (way out in t SARM (way out in the west) has a new trans mitter just waiting for his new generator, so h will seen be able to give the QRM a real run for

MANUFACTU.

NUMEROUS

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CALL AND INSPECT

THESE BARGAINS.

HUGE

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its money. SAMP is lightly tinkering with phone, but has not got very far as yet SIQ is busy with Test broadcasts so is not in much, however he lad a 50 Mc wavemeter calibrated so should be OK by the time cricket fluishes. Remainles next Zone book up will be on Sunday 5th August, at 10 a.m. GEELONG BOYS FORM A RADIO CLUB

The Geoloog Amateurs decided to form a Radio Club and have named it "The Geoloog Amateur Radio Club," A neeting was called and office-bearons elected. Alax Bell (YR&ABE) was elected. Emile Clais. A neering was called and office bearest elected. Alex Bell (VKSABE) was electer President; Jack Matbows (VESSY) and Ed Kosseck (VKSAKE), Vice-Presidents, Bob Wookey (VKSIC) (VESAEE), Vics-Fresidenia, Bob Wookey (VESIC) Secretary; Alf Fouter (VESAIP), Treasurer The Committee are Bill Bowmbill (VESE)), Archive Woolnough (VESBW), Bruce McKende (VESP), and Phil Greig (VESAFG). Fre Freeman (VESALC) was elected QSL Marager and Press

(VRSALO) was elected QSL Manager and Press Corresponders benefiting was held on 18th June, and was well attended by short were listeners and Hams. A Type 3 Mark 2 transmitter and a Type A was demonstrated by 3 MO and 18th I trackly has planned to constort field days, have lectures and

front page news, when 3LS with three Eastern Zon-front page news, when 3LS with three Eastern Zon-attribus, 38%, AHRK and 3AAL, all operating of 6094 Rc., played a bit part in the locating of boy who had strayed while his father was cutting one in the heavy timbered country new Tranship DOY who had strayed while he letter was cutting wood in the heary timbered country near Timamba SSS and SLAIL with portables went with the sweek-es and kept in coincumulation with SAHK who was sporating his home station and relaymr measures to SLS who was in term in touch with Romeil to SLS who was in term in touch with Romeil to SLS who was in term in touch with Romeil

to MLS who was in turn in touch with Reaseil Screek. Eas absonute the penul father of a brand see a lander op, comprete mill SQV, a beaveles cervies which mis are all wide but Graham samily merages to return home on the week-weak SPR has just Each before the contract of the contract of the contract of the contract is working eating the contract of the contract is working eating the penul see and by reports is working eating the penul see a contract of the co has been doing quite a lot of experimenting with bearms, and has managed to put out a SB signal on 50 Me. from his home location 3VL and SI's on his me, from his home praction 37th and 31th have been long quite a lot of rebuilding, the assi-job being a re-mplete new 50 Mc, traumitter and reports are very secondarying, both stations were operating on the 50 Mc, field day, one portable and the other from the home location,

75 ohms

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Amateur Radio; August. 1948

Page 17

An Amsterr Badio Club, with its own transmitting licence YESASS, has now been formed by members of the Army School of Sepatia at Bai combe The cub already has a membership of 20. The President is Lt.-Col Q E Every VESAGE with Major Moon Li Wright and Set Hethricha VESSIT active newmbers of the Committee Cpt. Becket

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SOUTH AUSTRALIA

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seed time was had by all.

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telling SQM that his (Rnm') wife had had a birthday, and he had given her a new pressure cooker, and now he has not so many polt and jew to wash up. You've get something there Ross, what to wash up. to wash up. You've get something there Ross, what one would call a seientific approach to house keeping 5GD heard working a VE named "Get the." When he limited the QSO, 5MD called betoot the terred a deal car to his acductive voice Try a little whitele next time Doe when trying to put your frame in on George's gett-friend 51% or to put your frame in on Geogra girl-frieed. I has been working quite a few ZS stations of Me. lately, and fairly chortles with glee if mecceeds in pisching one of them from SCD.

himself "Zomble Badoo," is still searring may DX. that popu up. Believe me, when it comes to week-ing DX he is far from being a Zomble. 597M is right amongst the DX with c.w., seems be have the search of the companion of the companion of the the companion of reve with 57.8 cm the Wagnalia as possible or crew with 57.8 cm the Wagnalia as possible companion. erro with 5ZR on the W signals as normal, conf-mate off what these two have that I have t Per-haps they have had It has than I have. Per-ley you lote a servet. 5GD has been blistered with a Pro-Forms B. Bestanof Thele 134 Whatf Unit! well, well, you're as guilty as he for not knowing that rule, only he was the pulmber.

in nappen to you.

Mr Sheard, the morse instructor of the A.O.C.P.

Classes, knocked the boys for a loop when he sent them
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I made up my mind to lay off Doc 5MD, but a correspondent has sent in news to the effect that bed-time stories as told by Doc are becoming very corrections to the displacement of the property of the propert detach the OM from the stack to beep washing up, etc. 5CD, whilst awaiting of a recent exam for a commercial ticket. a slight accident, the details of which are to disclosed. Trust all is OK by now OM. 6RJ is using an ATS whilst thicking about pr AND is unity in ATT while thinking these proposal alterations to the next transmiss. It is also considered to the control of t has Third been immerationed by the Northern Nic.

and the modelities was made imposed on Year and the modelities was made imposed on Year and the modelities was made in the control of th

to you)

Well, just as I was putting the copy into the exercises to post away, along comes a batch of notes from the South East from a new and welcome friend SUL, and I hasten to include them, although the Editor has been holding his blue procil in his hand for the last ten puragraphs, STW has recently d.r. installed, and has been chasing the c.w. on 14 Mc. SCHI is a very busy man these days, has had a c. installed; the only Ham in Mt. Gambier to enjoy that privilege. He works at the

nower station, but save that this had nothing to do with him getting the a.c.; oh yeah, 5JA is trying to siretch his backyard to take a half wave 7 Me. serial. Everybody is expecting to hear that all the boundary fences have mysterious to bear that all the boundary forces have supercritically a stated ownerships. He has a rotary beam on the property of the stated ownerships and the state of the

soon, and is also keen on 149 Mc

It has a ways been said that "the higger they come, the heavier they fall." It's been told of a well known VKS who has been holding forth on subject of v.f.o's., so much so that he closed everyone that of all the faings light to your to use a v.f.c. Well seem though someone has convinced him, for we understand he obtained study pieces of eluminum, condensers and olds and ends, with the result that recordensive and odds and ends, with the result that he is now using a v.f.o. on 14 Mc. Seems as though he has some more explaining to do to convince everyone that a PANSY has a sweet performe

WESTERN AUSTRALIA

The general involving was field on 1223, July Dere were 5d members present and WARAW in citizen for 18 days) R. J. Commonwhere of the Commonwhere from 5WZ, 5MZ and 2AWV was read. Owing to the Golles situation a discrement was field as to the possibility of the WI A to obtain from U.S.A certain radio publications. Exeguirle will be made and tain radio publications. Enquiries will be made the outcome announced at the August meeting. SFL donated to the Division a series of ver-fine text books to form the nucleus of a library The organisation of the library has been left b

After the chin-wag nession 6RI7 commented on the fact that certain VEGs had been heard working in the American phone hand on 14 Mc. The con-tacts being of a local and very unimportant rotust. In the American phone hand on 16 Mc. The con-tacts being of a local and very unimportant rotues, much unnecessary QRM was being caused to other stations trying to work the Ws. A discussion for leawed and SRD pointed nut that this only occurred accusionally and that generally the divisions of the

band were respected.

A series of between the first are a buffer of series of the control of the first are a buffer series of the control of

aimed with a maintenantical approach now the observed was practically flat for plus or minus a GGR fellowed up with an imprompt better a piece of LFF equipment. This was particularly on a piece of LFF equipment. This was particolarly interesting as its principles of operation ways con-sidered. Another ib, meeting, well attended, closed

PERSONALITIES

ASTW knows he way around Jandakot, ask 6 AP; 6 WS has just had his 74th birthday. He is still as a scrive Anathern and claims that this hobby the constant of the control o self one of those shiny new roll units

6GP was beerd talking about 14 Mc. beam and wind mill towers at the last W.I.A. meeting Rew is it getting out now Olarrie? 6EO han't been heard recently How about some dope from down heard recently. How about some dope from down Wagin war fele? We hear fill it laving a spell in hospital. Hope everything is OK again now John and that we will have the old rig on the air ason. Very pleased to see SHW at the last W.I.A. meeting. He had a stack of DX cards to seed too flew many times W.A.S. ON? 6CM is William section. The last is refer in TX cases, the second to Blow mere times WAA ONLY office is seen to be se

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Amateur Radio; August, 1948

Page 19

map lately. What's happened to SMU and SDG

sage lately. What's bappened to SMU and COO GET pa experience in the same 12 Me. DX GET pa experience in the same 12 Me. DX GET pa experience in the same 12 Me. DX GET particularly and the same 12 Me. DX GET particular and the same 12 Me. DX GET partic

TASMANIA

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The mouthly genute acretice of the Will. A Criminal pittion? Was held up the first Wichmoder, and the pitting of the first Wichmoder, and the pitting of the first Wichmoder, and the pitting of the pitting o

follows?

7KG is averelling with a new receiver, going to be something hot so I hear. 7CT not very active, prince wrecks the gord during the stage and the following the stage of the following the stage of the following the fol

NORTHERN ZONE

Had everything gone according to plan it would have been possible in these notes to have amounced the formation of the Northern Zone, however the influona cyldenic laid low some of our members and it was decided to postpone our meeting for one work.

At a recent meeting it was considered that we had sufficient members to form this zone and a proposed set of rule, which have seen and a proposed set of rule, which have seen and accepted except. For one small amendment, Proposals were then made as to our zone boundaries, also the others of the total seen and the second seen and accepted to the total seen and the seen and

be held in Learnengee on the seroud Pricky night of such most and the Learnengee of the seroud Pricky night of such district, price price and most of our sumblers, gave upon the control of the sumblers gave upon the control of the

The 144 Mc. gang are still active, however just what gear is being used I cannot say because every time I try to find out, something is either being

rilt or dismantied.

Although the Nor-West Coast Hams do not actually Although the Nor-West Coust Harms do not schmilly come moder that heading we like to record their delays: whenever possible and it gives me great it one of the old-linear who did some creation was a subject to the control of the co

FIFTY AND UP

Neel 187 said us a vide con 50 Me.) on Printy midday, 977 feel. We enhance the feel of the Printed Conference and there was Neel 87 with QEB; he bear you to 30 plan. Come noom, RER, called east and Drive, beaked with Max and as 11 looked like Neel would be "in cold" any need beated beated in on Max with the cold," as you exclude beated in on Max Max had at lenst one contact with Neel, but the Core shat before Richard coold finish his QeB.

DI at Mt. Cedes, 70 miles SR, of Melbourne, used a 521, both transmitter and receiver. Fower sot starting when wasted. Batterio also gwe some trouble. Jim world JRR at Macragall, 37L at Red Hill, 3FQ and 4HK near Melbourne. Jin't receiver was a bit new to him and this cost him a few contacts this cost him a few contacts.

3 VL was no portable rig and had some contacts.

3 VL was no portable rig and had some contacts.

3 VL was no portable rig and had some contacts.

3 VL sales, 380, 305 (bits XIL suling home righ.

301, 3188, 380, 305 (bits XIL suling home righ.

302 had been sometimed portable and Sex worked from home rig. 382 had his "portable" at Macena, copied a let on 10 Me, but analy 50 nath in his mobile. Also much activity between fixed Ram stations on the band.

144 Mc DIGEST

The highlight of the operations for June, was a long that of a few days the operations of June, was a long that of a few days for the latest of the state of the

strongstrife diets or funcial are responsible and common control on a TW service of the TW service of the TW service of the Service of the Service of the TW service of the Control of the most routine activity on 144 Mc. In Terra is the most routine activity on 144 Mc. In Terra is the most routine activity on 144 Mc. In Terra is the most routine keeping the head 'hot." New arrival is 4KH, cid King Heavy down in Wymann. The locals noticed a whale of a difference when Bill holsted his antenns up from 20 to 40 feet in height. (Wymons is some 10 or 12 miles from height.)

the City.)

Business in VEG is slack and reports say that conditions are not up to the 166 Mc. standard. However SJD, SGP, SNG and bGA are keeping the ball rolling; the latter is raising the herbs to 100

watts.

YES activity on 144 Mc. included successful re-broadcasts of the 28.7 Mc. news following the scaling attempt reported last month. We believe that any day now the air will be filled with signals on the 576 Mc. band. Go to it fellats, but make one you are in the band and let \$1.00

THE FRANKLIN SERIES PHASED ARRAY

Since the publication of the article on this array in the May, 1948, issue of the Magazine, many requests have been received for additional data on the best type of terminating resistor to use. VK3KU makes the following sugges-tions, each of which will be quite

satisfactory. 1. A 110 volt 40 watt metal filament lamp.

2. A bank of carbon resistors in parallel, which are capable of dissipating 25% of the transmitter power.

3. A wire wound non-inductive resistor made by winding two resistance wires on a former, connecting the two ends together at one end of the winding, and making the termination of the beam to the wires at the other end of the former. The resistance wire should be enamelled or otherwise insulated, to avoid shorting of turns.

Owing to the reduced number of pages in the Magazine, it is regretted that some features have been condensed or omitted .- Editor. FOR SALE,

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FOR SALE.—ATR2A Transmitter-Receiver, good used condition, complete with tubes, £10/10/-; brand new FS6 Transceiver complete with power supply £10/10/-. VK3NY, 25 Elaroo Ave., Camberwell, Vic. (WM 3958).

FOR SALE.—Bendix TA12D Trans-mitter and MP28B Modulator Power Supply. Complete except one 6F6. Includes five 807s and motor-driven frequency change. £20. N. Serpell, 12 Royal Crescent, Camberwell, Vic.

FOR URGENT SALE.—Transceivers 109 and 22, English, with power packs; two G12, one Goodman, Twin Cone Speakers; Swales and Swan Frequency Dividing Network H.D. Output Trans-formers, Lexington and Technico Fickups with Sapphires, University M.V.A. Meter. All in first class order. Accept any offer over half current prices. N. M. Robb, 8 Kent Road, Box Hill, Vic.

WANTED.—BC453 190-550 Kc. Com-mand Receiver. A. K. Head, 12 Peverill Street, Balwyn, Vic., or ring WF 8212.

WANTED.—Loan of copy of "Amateur Radio" featuring 50 watt transmitter 6V8, 6P8, 809; published during 1983. Will return promptly. R. H. Hilder, Hunthawang Station, via Hill—W.F.H. ston, N.S.W.

WANTED.-Stromberg Carlson Type F Condenser, three gang. VK3KF, B. E. Cabena, 20 Uvadale Grove, Kew

(Haw. 2571). WANTED .- 1,000 Kc. Crystal for LM

Type Bendix Frequency Meter. Jack Duncan, 23 Parkside Avenue, Balwyn, Vic. (VK3VZ). WF 4591.



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Primary . . . 8000—5200—3800 ohms. . . . CT Rating: 50 Watts . Audio/Speech. Sec.: 10000-7500-6500-5500-4500-3500 ches. Unbelanced Secondary DC . . . 160 mA. Bese: 4" x 35" x 4]" H. . . . Weight: 9lbs. Mntg.: U1 11 . . . "5" isZ1".

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